

2425 New Holland Pike, PO Eox 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax; 717-656-2681 • www.lancasterlabs.com

ANALYTICAL RESULTS

Prepared by:

Prepared for:

Lancaster Laboratories 2425 New Holland Pike Lancaster, PA 17605-2425 KEMRON Environmental Services 1359A Ellsworth Industrial Blv Atlanta GA 30318

December 28, 2011

Project: Riverside Avenue

Submittal Date: 12/14/2011 Group Number: 1281138 SDG: RAK01 PO Number: SF1838-018 State of Sample Origin: NJ

Client Sample Description
Frac Tank 3 Grab Sample
Building 7 Basement Solid Grab Sample

Lancaster Labs (LLI) #

6500135 6500136

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO

KEMRON Environmental Services

Attn: Janelle Murphy

COPY TO ELECTRONIC COPY TO

Data Package Group



PO Sox 12425, Lancaster, PA 17605-2425 •717-656-2300 Fax:717-656-2681 • www.lancasterlabs.com

Questions? Contact your Client Services Representative Loran A Carter at (717) 656-2300 Ext. 1375

Respectfully Submitted,

michely Smith Michele J. Smith Senior Specialist



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Page 1 of 2

Sample Description: Frac Tank 3 Grab Sample

Riverside Avenue

LLI Sample # WW 6500135 LLI Group # 1281138 Account # 09694

Project Name: Riverside Avenue

Collected: 12/12/2011 16:30

by KS

KEMRON Environmental Services

1359A Ellsworth Industrial Blv

Atlanta GA 30318

Submitted: 12/14/2011 18:40 Reported: 12/28/2011 16:45

FT3RA SDG#: RAK01-01

CAT No.	Analysis Name	CAS Number	As Received Result	As Received MRL*	As Received EDL	Dilution Factor
Dioxi	ns/Furans	SW-846 8290A	pg/l	pg/l	pg/l	
10915	2378-TCDD	1746-01-6	< 200	200	33.6	1
10915	12378-PeCDD	40321-76-4	< 1,000	1,000	62.7	1
10915	123478-HxCDD	39227-28-6	< 1,000	1,000	91.3	1
10915	123678-HxCDD	57653-85-7	47,500 B	,1,000	92.6	1
10915	123789-HxCDD	19408-74-3	2,370 B	1,000	85.3	1
10915	1234678-HpCDD	35822-46 <u>-</u> 9	3,290,000 EB	1,000	446	1
10915	OCDD	3268-87-9	59,800,000 EB	2,000	639	1
10915	2378-TCDF	51207-31-9	222 C	200	53.6	1
10915	12378-PeCDF	57117-41-6	< 1,000	1,000	29.8	1
10915	23478-PeCDF	57117-31-4	,< 1,000	1,000	27.0	1
10915	123478-HxCDF	70648-26-9	2,820 B	1,000	78.2	1
10915	123678-HxCDF	57117-44-9	< 1,000	1,000	74.1	1
10915	123789-HxCDF	72918-21-9	< 1,000	1,000	71.6	1
10915	234678-HxCDF	60851-34 - 5	2,420 B	1,000	73.9	ī
10915	1234678-HpCDF	67562-39-4	170,000 B	1,000	127	1
10915	1234789-HpCDF	55673-89-7	14,800 B	1,000	143	1
10915	OCDF	39001-02-0	1,330,000	2,000	108	1

Reporting limits were raised due to interference from the sample matrix.

An OPR was not analyzed due to the reduced volume necessitated by the sample.

Total	Homologues	SW-846	8290A	pg/l		pg/l	pg/l	
10915	Total TCDD		41903-57-5	3,110	QB	200	33.6	1
10915	Total PeCDD		36088-22-9	5,210	ОB	1,000	62.7	1
10915	Total HxCDD		34465-46-8	93,100 QB	~	1,000	89.6	ī
10915	Total HpCDD		37871-00-4	4,750,000 B		1,000	446	1
10915	Total PCDD		n.a	64,600,000 BQ	1			1
10915	Total TCDF		55722-27-5	4,710	QB	200	53.6	1
10915	Total PeCDF		30402-15-4	4,560	QB	1,000	28.3	1
10915	Total HxCDF		55684-94-1	90,900 QB		1,000	74.3	1
10915	Total HpCDF		38998-75-3	917,000 QB		1,000	134	1
10915	Total PCDF		n.a.	2,350,000 BO			٠.	1
10915	Total PCDD/PCDF		n.a.	67,000,000 BO				1

rapeled Compounds	*Rec	Windows
13C12-2378-TCDD	72	25 - 164
13C12-12378-PeCDD	7 73	25 - 181
13C12-123478-HxCDD	60	32 - 141
13C12-123678-HxCDD	62	28 - 130
13C12-123789-HxCDD	64	28 - 130



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Page 2 of 2

Sample Description: Frac Tank 3 Grab Sample

Riverside Avenue

LLI Sample # WW 6500135 LLI Group # 1281138 Account # 09694

Project Name: Riverside Avenue

Collected: 12/12/2011 16:30

by KS

KEMRON Environmental Services

1359A Ellsworth Industrial Blv

Atlanta GA 30318

Submitted: 12/14/2011 18:40 Reported: 12/28/2011 16:45

FT3RA SDG#: RAK01-01

CAT No.	Analysis Name		CAS Number	As Received Result	As Received MRL*	As Received EDL	Dilution Factor
Label	ed Compounds	%Rec	Windows				
13C12	-1234678-HpCDD	58	23 - 140				
13C12-	-OCDD	50	17 - 157				
13C12-	-2378-TCDF	53	24 - 169				
13C12-	-12378-PeCDF	55	24 - 185				
13C12-	-23478-PeCDF	58	21 - 17 8				
. 13C12-	-123478-HxCDF	54	26 - 152				
13C12-	-123678-HxCDF	54	26 - 123				
13C12-	-234678-HxCDF	54,	28 - 136				
13C12-	-123789-HxCDF	60	29 - 147				
13C12-	-1234678-HpCDF	52	28 - 143				
13C12-	-1234789-HpCDF	50	26 - 138				
13C12-	-OCDF	43	17 - 157				

Dioxins/Furans Data Qualifiers:

- B Detected in Method Blank
- U Undetected
- J Estimated concentration between Estimated Detection Limit and Minimum Level
- E Exceeds calibration range
- C Confirmed quantitation on secondary GC column
- Q EMPC Estimated Maximum Possible Concentration
- F Interference is present
- S Saturation of detection signal

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution
10915	Dioxins/Furans in Water - HRMS	SW-846 8290A	1	11354002	12/22/2011 19:44	Joseph D Anderson	Factor 1
10914	Dioxins/Furans in Water - SepF	SW-846 8290A	1	11354002	12/20/2011 12:00	Deborah M Zimmerman	1



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Page 1 of 4

Sample Description: Building 7 Basement Solid Grab Sample

Riverside Avenue

LLI Sample # SW 6500136 LLI Group # 1281138

Account # 09694

Project Name: Riverside Avenue

Collected: 12/13/2011 08:00

KEMRON Environmental Services

1359A Ellsworth Industrial Blv

Atlanta GA 30318

Submitted: 12/14/2011 18:40

Reported: 12/28/2011 16:45

BL7RA SDG#: RAK01-02*

Analysis Name

Dry CAS Number Result

Dry Limit of Ouantitation*

Dry Method Detection Limit

Dilution Factor

Wet Chemistry

SM20 2540 G

00111 Moisture

CAT

No.

n.a.

44.4

0.50

0.50

1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an



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Page 2 of 4

Sample Description: Building 7 Basement Solid Grab Sample

Riverside Avenue

LLI Sample # SW 6500136 LLI Group # 1281138

Account # 09694

Project Name: Riverside Avenue

Collected: 12/13/2011 08:00

by KS

KEMRON Environmental Services

1359A Ellsworth Industrial Blv

Atlanta GA 30318

Submitted: 12/14/2011 18:40 Reported: 12/28/2011 16:45

BL7RA SDG#: RAK01-02*

CAT No.	Analysis Name		CAS Number	Dry Result		Dry MRL*		EDL Dry		Dilution Factor
Dioxi	ns/Furans	SW-84	16 8290A	ng/kg		ng/kg		ng/kg		
11031	2378-TCDD		1746-01-6	681	В	17.1		2.39		1
11031	12378-PeCDD		40321-76-4	1,810	В	85.6		2.16		1
11031	123478-HxCDD		39227-28-6	570	В	85.6		2.46		1
11031	123678-HxCDD		57653-85- 7	2,710	В	85.6		2.75		1
11031	123789-HxCDD		19408-74-3	3,430	· B	85.6		2.51		1
11031	1234678-HpCDD		35822-46-9	98,400 EB		85.6		8.39		1
11031	OCDD		3268-87-9	1,640,00 EB	00	171	,	7.85		1
11031	2378-TCDF		51207-31-9	< 17.1		17.1		0.912		1
11031	12378-PeCDF		57117-41-6	< 85.6		85.6		0.592		1
11031	23478-PeCDF		57117-31-4	< 85.6		85.6		0.529		1
11031	123478-HxCDF		70648-26-9	< 85.6		85.6		1.16		1
11031	123678-HxCDF		57117-44-9	< 85.6		85.6		1.10		1
11031	123789-HxCDF		72918-21-9	< 85.6		85.6		1.26		1
11031	234678-HxCDF		60851-34-5	< .85.6		85.6		1.11		1
11031	1234678-HpCDF		67562-39-4	874	В	85.6		1.50		1
11031	1234789-HpCDF		55673-89-7	96.4	В	85.6		1.77		1
11031	OCDF		39001-02-0	3,670	В	171		1.30		1
Repo	rting limits were ra	ised due	e to interference fr	om the sam	ple ma	trix.			•	
Total	Homologues	SW-84	16 8290A	ng/kg		ng/kg	t	ng/kg		
11031	Total TCDD		41903-57-5	3,630	В	17.1		2.39		1
11031	Total PeCDD		36088-22-9	10,500 QB		85.6		2.16		1
11031	Total HxCDD		34465-46-8	27,900 QB		85.6		2.57		1
11031	Total HpCDD		37871-00-4	164,000 B		85.6		8.39		1
11031	Total TCDF		55722-27-5	150	QB	17.1		0.912		1
11031	Total PeCDF		30402-15-4	208	QB	85.6		0.559		1
11031	Total HxCDF		55684-94-1	773 .	QB	85.6		1.15		1
11031	Total HpCDF		38998-75-3	3,970	QB	85.6		1.62		1
	ed Compounds	%Rec	Windows							
	2378-TCDD	80	25 - 164	_						
	12378-PeCDD	84	25 - 181							
	123478-HxCDD	77	32 - 141							
13C12-	123678-HxCDD	73	28 - 130							
13C12-	123789-HxCDD	76	28 - 130							*
13C12-1	1234678-HpCDD	70	23 - 140							
13C12-0	DCDD	56	17 - 157		•					
13C12-2	2378-TCDF	66	24 - 169							
13C12-	12378-PeCDF	67	24 - 185							•
13C12-2	23478-PeCDF	70 -	, 21 - 178							
	123478-HxCDF	66	26 - 152							
13C12-1	L23678-HxCDF	67	26 - 123							
13C12-2	234678-HxCDF	66	28 - 136							
	L23789-HxCDF	64	29 - 147							
13C12-1	1234678-HpCDF	62	28 - 143		•					

^{*=}This limit was used in the evaluation of the final result



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Page 3 of 4

Sample Description: Building 7 Basement Solid Grab Sample

Riverside Avenue

LLI Sample # SW 6500136

LLI Group # 1281138 Account # 09694

Project Name: Riverside Avenue

Collected: 12/13/2011 08:00

by KS

KEMRON Environmental Services

1359A Ellsworth Industrial Blv

Atlanta GA 30318

Submitted: 12/14/2011 18:40 Reported: 12/28/2011 16:45

BL7RA SDG#: RAK01-02*

CAT Dry Dry Dry Dilution
No. Analysis Name CAS Number Result MRL* EDL Factor

 Labeled Compounds
 *Rec
 Windows

 13C12-1234789-HpCDF
 57
 26 - 138

 13C12-OCDF
 45
 17 - 157

Dioxins/Furans Data Qualifiers:

- B Detected in Method Blank
- U Undetected
- J Estimated concentration between Estimated Detection Limit and Minimum Level
- E Exceeds calibration range
- C Confirmed quantitation on secondary GC column
- Q EMPC Estimated Maximum Possible Concentration
- F Interference is present
- S Saturation of detection signal



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Page 4 of 4

Sample Description: Building 7 Basement Solid Grab Sample

Riverside Avenue

LLI Sample # SW 6500136 LLI Group # 1281138 Account # 09694

Project Name: Riverside Avenue

Collected: 12/13/2011 08:00

by KS

KEMRON Environmental Services 1359A Ellsworth Industrial Blv

Atlanta GA 30318

Submitted: 12/14/2011 18:40 Reported: 12/28/2011 16:45

BL7RA SDG#: RAK01-02*

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11031	Dioxins/Furans in Solids- HRMS	SW-846 8290A	1	11350003	12/20/2011 13:57	Joseph D Anderson	1
11030	Dioxins/Furans in Solids - Sox	SW-846 8290A	1	11350003	12/16/2011 12:00	Deborah M Zimmerman	1
00111	Moisture	SM20 2540 G	1	11350820006B	12/16/2011 19:38	Scott W Freisher	1



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Page 1 of 3

Quality Control Summary

Client Name: KEMRON Environmental Services

Reported: 12/28/11 at 04:45 PM

Group Number: 1281138

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

Analysis Name	Blank <u>Result</u>	Blank LOO**	Blank <u>MDL</u>	Report <u>Units</u>	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 11350820006B Moisture	Sample nu	mber(s):	6500136		100		99-101		
Analysis Name	Blank <u>Result</u>	Blank MRL**	Blank <u>EDL</u>	Report <u>Units</u>	OPR %REC	OPRD %REC	OPR/OPRD Limits	<u>RPD</u>	RPD Max
Batch number: 11350003 2378-TCDD 12378-PeCDD 123478-HxCDD 123678-HxCDD 1234678-HyCDD 1234678-HpCDD 0CDD 2378-TCDF 12378-PeCDF 123478-PeCDF 123478-HxCDF 123478-HxCDF 123478-HxCDF 123478-HxCDF 123478-HyCDF 123478-HyCDF 123478-HyCDF 123478-HyCDF 123478-HyCDD 12378-PeCDD 12378-PeCDD 12378-PeCDD 12378-PeCDD 12378-PeCDD 12378-PeCDD 12378-PeCDD 12378-PCDF 12378-HxCDD 12378-PCDF 12378-PCDF 12378-PECDF 12378-PECDF 12378-PECDF 12378-PECDF 123478-HxCDF 123478-HxCDF 123478-HxCDF 123478-HxCDF 123478-HxCDF 123478-HyCDF 1234678-HyCDF 1234678-HyCDF 1234678-HyCDF 1234678-HyCDF 1234789-HyCDF	Sample nu < 1.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00 < 5.00	1.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00	0.0151 0.0151 0.0151 0.0115 0.0118 0.0109 0.0161 0.0177 0.00840 0.00830 0.0117 0.0117 0.0142 0.0127 0.00890 0.0122 0.0205 6500135 19.8 21.8 14.3 14.4 13.6 16.0 23.9 18.0 13.2 12.5 11.3 10.8 10.5 9.91 10.7	ng/kg ng/lp pg/l pg/l pg/l pg/l pg/l pg/l pg/l	90 94 91 92 99 96 97 99 100 99 103 98 91 96 99		67-158 70-142 70-164 76-134 64-162 .70-140 78-144 75-158 80-134 68-160 72-134 84-130 70-156 82-122 78-138 63-170		

*- Outside of specification

- **-This limit was used in the evaluation of the final result for the blank
- (1) The result for one or both determinations was less than five times the LOQ / MRL.
- (2) The unspiked result was more than four times the spike added.



Group Number: 1281138

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Page 2 of 3

Quality Control Summary

Client Name: KEMRON Environmental Services

Reported: 12/28/11 at 04:	45 PM								
	Blank	Blank	Blank	Report	OPR	OPRD	OPR/OPRD		
<u>Analysis Name</u>	Result	MRL**	EDL	Units	%REC	%REC	<u>Limits</u>	RPD	RPD Max
Total TCDD	< 1.00	1.00	0.0151	ng/kg					
Total PeCDD	< 5.00	5.00	0.0151	ng/kg					
Total HxCDD	< 5.00	5.00	0.0114	ng/kg					
Total HpCDD	< 5.00	5.00	0.0161	ng/kg					
Total TCDF	< 1.00	1.00	0.0157	ng/kg					
Total PeCDF	< 5.00	5.00	0.00830	ng/kg					
Total HxCDF	< 5.00	5.00	0.0130	ng/kg					
Total HpCDF	< 5.00	5.00	0.0103	ng/kg					
Batch number: 11354002	Sample num	ber(s): 6!	500135						
Total TCDD	< 200	200.	19.8	pg/l					
Total PeCDD	< 1,000	1,000.	21.8	pg/l			•		
Total HxCDD	< 1,000	1,000.	14.1	pg/l					
Total HpCDD	< 1,000	1,000.	16.0	pg/l					
Total PCDD	1,390			pg/l					
Total TCDF	< 200	200.	18.0	pg/l					
Total PeCDF	< 1,000	1,000.	12.8	pg/l					
Total HxCDF	< 1,000	1,000.	10.7	pg/l					
Total HpCDF	< 1,000	1,000.	10.3	pg/l					
Total PCDF	988			pg/l					
Total PCDD/PCDF	2,380			pg/l					

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS <u>%REC</u>	MSD %REC	MS/MSD <u>Limits</u>	RPD	RPD <u>MAX</u>	BKG Conc	DUP <u>Conc</u>	DUP RPD	Dup RPD <u>Max</u>
Batch number: 11350820006B Moisture	Sample	number(s)	: 6500136	BKG:	P49969	4 10.8	10.2	6	15

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Dioxins/Furans in Solids-HRMS Batch number: 11350003

70 78 66	66 68	67	66	64
	68			n 4
6.6		76	69	66
66	58	63	59	60
4 21-178	26-152	26-123	28-136	29-147
234678-HpCDF 13C12-1234	4789-HpCDF 13C12-OCDF	13C12-12378-PeC	DD 13C12-123478-HxCDD	13C12-123678-HxCDD
57	45	84	77	73
64	52	96	86	88
55	46	80	70	70
	13C12-1234 57	34678-HpCDF 13C12-1234789-HpCDF 13C12-OCDF 57 45 64 52	134678-HpCDF 13C12-1234789-HpCDF 13C12-OCDF 13C12-12378-PeC 57 45 84 64 52 96	134678-HpCDF 13C12-1234789-HpCDF 13C12-OCDF 13C12-12378-PeCDD 13C12-123478-HxCDD 57 45 84 77 64 52 96 86

*- Outside of specification

- **-This limit was used in the evaluation of the final result for the blank
- (1) The result for one or both determinations was less than five times the LOQ / MRL.
- (2) The unspiked result was more than four times the spike added.



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Page 3 of 3

Quality Control Summary

Client Name: KEMRON Environmental Services

services

Group Number: 1281138

Reported: 12/28/11 at 04:45 PM

Surrogate Quality Control

Limits:	28-143	26-138	17-157	25-181	32-141	28-130
	13C12-123789-HxCDD	13C12-1234678-HpCDD	13C12-OCDD	13C12-2378-TCDF	13C12-12378-PeCDF	
6500136	76	70	56	66	67	·
Blank	89	87	72	64	77	
OPR	71	73	60	52	68 ·	
Limits:	28-130	23-140	17-157	24-169	24-185	
		rans in Water - HR	MS			
Batch nu	mber: 11354002					
	13C12-2378-TCDD	13C12-23478-PeCDF	13C12-123478-HxCDF	13C12-123678-HxCDF	13C12-234678-HxCDF	13C12-123789-HxCDF
6500135	72	58	54	54	54	60
Blank	75	67	66	68	68	73
Limits:	25-164	21-178	26-152	26-123	28-136	29-147
	13C12-1234678-HpCDF	13C12-1234789-HpCDF	13C12-OCDF	13C12-12378-PeCDD	13C12-123478-HxCDD	13C12-123678-HxCDD
6500135	52	50	43	73	60	62
Blank	70	69	62	84	78	79
Limits:	28-143	26-138	17-157	25-181	32-141	28-130
	13C12-123789-HxCDD	13C12-1234678-HpCDD	13C12-OCDD	13C12-2378-TCDF	13C12-12378-PeCDF	
6500135	64	58	- 50	53	55	
Blank	81	82	69	60	65	
Limits:	28-130	23-140	17-157	24-169	24-185	

^{*-} Outside of specification

^{**-}This limit was used in the evaluation of the final result for the blank

⁽¹⁾ The result for one or both determinations was less than five times the LOQ / MRL.

⁽²⁾ The unspiked result was more than four times the spike added.

Lancaster Laboratories

Analysis Request/Environmental Services Chain of Custody

For Lancaster Laboratories use only Acct. # 9694 Group #: 1281138 Sample #: 65 00135-36

Client:	KEMRON E	nvironmental	Services	Acct. #:					Matr	Matrix				Analyses Requested									For Lab Use Only		
Project Name/#: Riverside Avenue			PWSID#:											Pre	Preservation Codes							FSC:			
Project Manager: Kevin Shaver			P.O.#: SF1838-018					용	<u></u>													SCR#:			
Sampler: Kevin Shaver		Quote #:					Potable	NPDES		ners	δ.										Preservation Co		eceta		
Name of State where samples were collected:			New Jersey								Containers	ıs 829										Herson Tellinguitate Serio Selpo DH Serio Selpo DH Serio Ser		vodn sag	
Sample Ider	ntification		-	Date Collected	Time Collected	Grab	Composite	Soil	Water		Other	Total # of C	Dioxin/Furans 8290A				è.						Remar	ks	Temperature of seruil (if requested)
Frac Tank 3			12/12/2011	1630	Х			*		X	2	X											<u> </u>		
Building 7 Basement Solid			12/13/2011	0800	Х		*	17. 14. Kg	1	X	1	X		_	4	-	_	\dashv	\dashv						
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		<u>.</u>		• .														\exists							
Turnaround Time Requested (TAT) (please circle): Normal (Rush)						1	Relinquished by:						Date Time			- 1	Received				Date	Time			
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)				ırcharge.)							MINERALINA					12.1411 1030				Received by:				1/4/4	10:30
Date results are needed: 12/30/2011										Relinquished by:				Date Time				Received by.			y :	Date	Time		
Rush results requested by (please circle): Phone				Phone (E-mail)					Relinquished by:				40	Date Time			Received by			y:	Date	Time		
Phone #: 404-636-0928 E-mail address: imurphy@kemron.com						ĺ	,									$\perp \lambda$									
Data Package Options (please circle if required) EDD Required?							Relinquished by:					Date Time		•	Received by		y:	Date	Time						
Type I (Validation/non-CLP) MA MCP				Yes No				Į	(1				<u> </u>	<u> </u>		
Type III (Reduced non-CLP) CT RCP							Relinquished by: Date Time Received by: Date				Time														
Type IV (CLP SOW) Site-specific QC (MS/MSD/Dup)? Yes No						District Property of the second by				Date	Time														
Type VI (Raw Data Only) (If yes, indicate QC sample and submit trip					plecat	le	_		Reli	Relinquished by: Date Time Received by:						Time									
TX TRRP-13 sample volume)																					יי	1 1/1/4	1070		

Lancaster Laboratories, Inc. 2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 717-656-2300



Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
С	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
ug	microgram(s)	mg	milligram(s)
ml	milliliter(s)	Ī	liter(s)
m3	cubic meter(s)	ul	microliter(s)
<	less than - The number following th	e sian is the limit of au	antitation, the smallest amount of analyte w

- < less than The number following the sign is the <u>limit of quantitation</u>, the smallest amount of analyte which can be reliably determined using this specific test.
- > greater than
- J estimated value The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).
- ppm parts per million One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.
- ppb parts per billion
- Dry weight basis

Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Inorganic Qualifiers

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

			•
Α	TIC is a possible aldol-condensation product	В	Value is <crdl, but="" th="" ≥idl<=""></crdl,>
В	Analyte was also detected in the blank	E	Estimated due to interference
С	Pesticide result confirmed by GC/MS	M	Duplicate injection precision not met
D	Compound quantitated on a diluted sample	N	Spike sample not within control limits
Ε	Concentration exceeds the calibration range of	S	Method of standard additions (MSA) used
	the instrument		for calculation
N.	Presumptive evidence of a compound (TICs only)	U	Compound was not detected
Р	Concentration difference between primary and	W	Post digestion spike out of control limits
	confirmation columns >25%	*	Duplicate analysis not within control limits
U	Compound was not detected	+	Correlation coefficient for MSA < 0.995
X,Y,Z	Defined in case narrative		

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

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